Hospitalization and Disability Associated with Illnesses/Injuries *Definitely or Probably Related* to Pesticide Exposure in California[1,2], Summarized by Occupational Status and Activity
2010

Occupational[3]

Activity[4]	Total Cases	Hospitalization			Disability		
		No. Cases	%	Unknown[5]	No. Cases	%	Unknown[6]
Mixer/Loader	42	1	2.0	0	9	21.0	2
Applicator	68	2	2.0	1	10	14.0	9
Mechanical	14	0	0	0	6	42.0	3
Packaging/Processing	34	0	0	0	9	26.0	10
Field Worker	107	0	0	0	14	13.0	5
Routine Indoor	28	0	0	0	7	25.0	4
Routine Outdoor	13	0	0	1	5	38.0	3
Transport/Storage/Disposal	6	0	0	1	3	50.0	1
Emergency Response	4	0	0	0	0	0	0
Other	34	0	0	0	8	23.0	3
Unknown	4	0	0	0	0	0	2
Total Occupational[7]	**354**	**3**	**0.8**	**3**	**71**	**20.1**	**42**

Non-Occupational[3]

Activity[4]	Total Cases	Hospitalization			Disability		
		No. Cases	%	Unknown[5]	No. Cases	%	Unknown[6]
Mixer/Loader	8	0	0	0	1	12.0	1
Applicator	68	2	2.0	0	3	4.0	23
Routine Indoor	54	2	3.0	0	0	0	16
Routine Outdoor	30	1	3.0	0	0	0	5
Other	50	11	22.0	4	5	10.0	29
Unknown	7	0	0	0	0	0	5
Total Non-Occupational	**217**	**16**	**7.4**	**4**	**9**	**4.1**	**79**
TOTAL CASES	**580**	**20**	**3.4**	**8**	**81**	**14.0**	**127**

1Source: California Department of Pesticide Regulation, Pesticide Illness Surveillance Program.

2 Relationship: Degree of correlation between pesticide exposure and resulting symptomatology.

Definite	: High degree of correlation between pattern of exposure and resulting symptomatology. Requires both medical evidence (such as measured cholinesterase inhibition, positive allergy tests, characteristic signs observed by medical professional) and physical evidence of exposure (environmental and/or biological samples, exposure history) to support the conclusions.
Probable	: Relatively high degree of correlation exists between the pattern of exposure and the resulting symptomatology. Either medical or physical evidence is inconclusive or unavailable.

3 Occupational or Non-Occupational: The relationship between the illness/injury and the individual's work.

Occupational	: Work related. The individual was on the job at the time of the incident. This includes both paid employees and volunteers working in similar capacity to paid employees.
Non-Occupational	: Not work related. The individual was not on the job at the time of the incident. This category includes individuals on the way to or from work (before the start or after the end of their workday).

4 Type of Activity: Activity of the injured individual at the time of exposure

Mixer/Loader	: Mixes and/or loads pesticides. This includes: (1) removing a pesticide from its original container, (2) transferring the pesticide to a mixing or holding tank, (3) mixing pesticides prior to application, (4) driving a nurse rig, or (5) transferring the pesticide from a mix/holding tank or nurse rig to an application tank.
Applicator	: Applies pesticides by any method or conducts activities considered ancillary to the application (e.g., cleans spray nozzles in the field).
Flagger	: Flags for an aerial application, either fixed-winged or helicopter.
Mechanical	: Maintains (e.g. cleans, repairs or conducts maintenance) pesticide contaminated equipment used to mix, load or apply pesticides as well as the protective equipment used by individuals involved in such activities. This excludes the following: 1) maintenance performed by applicators on their equipment incidental to the application; 2) maintenance performed by mixer/loaders on their equipment incidental to mixing and loading; 3) decontamination by HAZMAT teams.
Packaging/Processing	: Handles (packs, processes or retails agricultural commodities from the packing house to the final market place. Field packing of agricultural commodities is classified as FIELD WORKER.
Field Worker	: Works in an agricultural field performing tasks such as advising, scouting, harvesting, thinning, irrigating, driving tractor (except as part of an application), field packing, conducting cultural work in a greenhouse, etc. Researchers performing similar tasks in an agricultural field are also included.
Routine Indoor	: Conducts activities in an indoor environment with minimal expectation for exposure to pesticides. This includes people in offices and businesses, residential structures, etc. who are not handling pesticides.
Routine Outdoor	: Conducts activities in an outdoor environment with minimal expectation for exposure to pesticides. This excludes field workers in agricultural fields. This includes gardeners who are not handling pesticides.
Manufacturing and Formulation	: Manufactures, processes or packages pesticides. This includes "mixing" if it is done in a plant for application elsewhere.
Transport/ Storage/ Disposal	: Transports or stores pesticides between packaging and preparation for use. This includes shipping, warehousing and retailing as well as storage by the end-user prior to preparation for use. Disposal of unused pesticides is also included in this activity. This excludes driving a nurse rig to an application site.

Emergency Response	:	Emergency Response Personnel (Police, fire, ambulance and HAZMAT personnel) responding to a fire, spill, accident or any other pesticide incident in the line of duty.
Other	:	Activity is not adequately described by any other activity category. This includes but is not limited to: 1) being inside a vehicle; 2) dog groomers not handling pesticides; 3) individuals handling pesticide treated wood; 4) two or more activities with potential for pesticide exposure.
Unknown	:	Activity is not known.

5 **Hospitalization Unknown**: Investigation did not specify whether hospitalization occurred or not.

6 **Disability Unknown**: Investigation did not specify whether disability occurred or not.

7 This total includes 9 cases in which the activity could not be determined as occupational or non-occupational.

Whom to Contact:

California Department of Pesticide Regulation
Worker Health and Safety Branch
Phone: (916) 445-4222.
Physical address: 1001 I St., Sacramento CA 95814-2828.
Mailing address: P.O. Box 4015, Sacramento, CA 95812-4015
Fax: (916) 445-4280
www.cdpr.ca.gov

About the Pesticide Illness Surveillance Program Data

Pesticide-related illnesses have been tracked within the state of California for more than 50 years. The California Environmental Protection Agency, Department of Pesticide Regulation (DPR) maintains a surveillance program which records human health effects of pesticide exposure. The Pesticide Illness Surveillance Program (PISP) documents information on adverse effects from pesticide products, whether elicited by the active ingredients, inert ingredients, impurities, or breakdown products. This program maintains a database, which is utilized for evaluating the circumstances of pesticide exposures resulting in illness. This database is consulted regularly by staff who evaluate(s) the effectiveness of the DPR pesticide safety programs and recommend changes when appropriate.